



# 2014 WATER QUALITY REPORT

This report is designed to inform you about the water quality and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water.

Meetings regarding the water system are held on an as-needed basis at regularly scheduled City Council meetings. City Council meetings are held at 7:00 pm on the 1<sup>st</sup> and 3<sup>rd</sup> Tuesday of each month at City Hall Council Chambers, 201 E. 5<sup>th</sup> Street.

The City of Gillette is supplied by groundwater pumped from 26 wells. The wells are drilled into three aquifers, the Lance/Foxhills, the Fort Union, and the Madison formation. The water is aerated and disinfected before being blended and pumped to the distribution system.

As water travels over the surface of the land or through the ground, it can dissolve naturally occurring minerals and in some cases, radioactive material. The water can also pick up substances such as: Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural operations and wildlife; Inorganic contaminants, such as salts and metals, which can be naturally occurring, or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming; Pesticides and herbicides, which may come from agriculture, urban storm water runoff, and residential uses; Organic chemical contamination, which come from industrial processes, gas stations, urban storm water runoff, and septic systems; Radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities.

All Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791. In order to ensure that tap water is safe to drink, EPA establishes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration establishes limits for contaminants in bottled water. Maximum contaminant levels (MCLs) are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime, to have a one-in-a-million chance of having the described health effect. Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care provider. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home

plumbing. The City of Gillette is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

## **An Explanation of the Water Quality Data Table**

In this table you will find terms and abbreviations you may not be familiar with. To help you better understand these terms we have provided the following definitions:

### **Maximum Contaminant Level Goal or MCLG:**

The level of a contaminant in drinking water below which there is no known risk to health. MCLGs allow for a margin of safety.

**Maximum Contaminant Level or MCL:** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

## **Attention Property Owners and Managers:**

Please share this report with your tenants. Thank you.

## **City of Gillette Water Division**

**611 N. Exchange Avenue  
Gillette, WY 82716  
(307) 686-5276**

## KEY FOR WATER TEST RESULTS

AL=Action Level
MCL=Maximum Contaminant Level
MCLG=Maximum Contaminant Level Goal
MFL=million fibers per liter
mrem/year=millirems per year
(a measure of radiation absorbed by the body)
ND=None Detected
pci/L=picocuries per liter (a measure of radioactivity)
ppm=parts per million, or milligrams per liter (mg/L)
ppb=parts per billion, or micrograms per liter (µg/L)
ppt=parts per trillion, or nanograms per liter
ppq=parts per quadrillion, of picograms per liter
TT=Treatment Technique
NTU=Nephelometric Turbidity Units

In addition, we tested for the following contaminants and found no detects.

### Inorganic Contaminants

antimony, arsenic, beryllium, cadmium, cyanide, mercury, nickel, thallium.

### Synthetic Organic Contaminants

2,4-D, 2,4,5-TP(silvex), alachlor, atrazine, benzo (a)pyrene, carbofuran, chlordane, dalapon, di(2-ethylhexyl)adipate, di(2-ethylhexyl)phthalate, dibromochloropropane, dinoseb, dioxin, endothall, endrin, epichlorohydrin, ethylene dibromide, glyphosate, heptachlor, heptachlor epoxide, hexachlorobenzene, hexachlorocyclopentadiene, lindane, methoxychlor, osamyl(vydate), PCBs (polychlorinated biphenyls), pentachlorophenol, picloram, simazine, toxaphene.

### Volatile Organic Contaminants

benzene, carbon tetrachloride, chlorobenzene, o-dichlorobenzene, p-dichlorobenzene, 1,2 dichloroethane, 1,1dichloroethylene, cis-1,2 dichloroethylene, trans-1,2-dichloroethylene dichloromethane, 1,2-dichloropropane, ethylbenzene, styrene, tetrachloroethylene, 1,2,4-trichlorobenzene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, toluene, vinyl chloride, xylenes.

## WATER TEST RESULTS

CONTAMINANT	YEAR	VIOLATION Y/N	LEVEL DETECTED	UNIT OF MEASURE	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
<b>MICROBIOLOGICAL CONTAMINANTS</b>							
Total Coliform	2014	N	0 Positive 38 Samples Monthly	Present or Not Present	0	1 Positive Sample	Naturally present in the environment.
Bacteria							
<b>RADIOACTIVE CONTAMINANTS</b>							
Alpha emitters	2014	N	Range 10.0-12.1	pci/L	0	15	Erosion of natural deposits
Radium 226+228	2014	N	Range 1.4-2.0	pci/L	0	5	Erosion of natural deposits
Uranium	2014	N	Range 0.007-0.009	ppb	0	30	Erosion of natural deposits
<b>INORGANIC CONTAMINANTS</b>							
Fluoride	2014	N	Range 0.7-1.5	ppm	4	4	Erosion of natural deposits, discharge from fertilizer & aluminum factories.
Nitrate (as nitrogen)	2014	N	Range 0.29-0.32	ppm	10	10	Runoff from fertilizer, septic tanks. Erosion of natural deposits, sewage.
Sodium	2014	N	3.0– 65	ppm		No MCL	Abundant and widespread constituent of rock & solids.
Lead (90th percentile)	2013	N	0.004	ppm	0	0.015	Corrosion of household plumbing systems.
Copper (90%)	2013	N	0.16	ppm	0	1.3	Corrosion of household plumbing systems.
Selenium	2014	N	.002-.004 mg/L	ppm	0.05	0.05	Discharge from petroleum refineries or mines, Erosion if natural deposits
Arsenic	2014	N	.002	ppm	0.0	0.01	Erosion of natural deposits; runoff from orchards Runoff from glass and electronics production wastes
<b>VOLATILE ORGANIC CONTAMINANTS</b>							
TTHM							
Total trihalomethanes	2014	N	Range 2.5-11 Avg. 7.0	ppb	0	80	By-product of chlorination.
HAA <sub>5</sub>							
Haloacetic Acids	2014	N	Range ND-4.3	ppb	0	60	By-product of chlorination.
Distribution Systems Chlorine Residual	2014	N	Min– 0.44 Max – 1.28	ppm ppm	N/A N/A		Maximum Residual Disinfectant Level 4 ppm

The tables below show results from tests taken in 2014.

CONSTITUENT	LEVEL DETECTED	UNIT OF MEASURE	CONSTITUENT	LEVEL DETECTED	UNIT OF MEASURE
Calcium	86-137	mg/L			
Magnesium	30-44	mg/L	Total Dissolved Solids	528-617	mg/L
Potassium	1-3	mg/L	Alkalinity, (CaCO <sub>3</sub> )	199-258	mg/L
Bicarbonate	243-315	mg/L	Hardness, (CaCO <sub>3</sub> )	340-520	mg/L
Sulfate	176-276	mg/L	pH	7.58-7.73	Std. Units